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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,898	10/11/2005	Patrick Pouteau	278971US2XPCT	6959

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EXAMINER	
EDWARDS, LYDIA E	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
03/05/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/552,898	POUTEAU ET AL.	
	Examiner	Art Unit	
	LYDIA EDWARDS	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-14 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ida et al. (US 6537801).

Regarding Claims 13, 14 and 19, Ida et al. ('801) discloses a biochip comprising: a plurality of useful molecular recognition areas distributed with a determined layout to create a format of molecular recognition areas; means for making optical position marks for each molecular recognition area, distributed with a determined layout to form an optical format, wherein the optical format and the format of recognition areas are two formats produced independently of each other; and means for determining relative position of the two formats provided on the biochip (Col 5, line 8, Col 6, line 65; Col 9, lines 7-32).

Regarding Claim 20, Ida et al. ('801) discloses a layer or a stack of thin layers, facilitating reflection of an optical format tracking beam, arranged between the optical format and the molecular recognition areas (Col 8, lines 25-32; Col 12, line 54-Col 13, line 48; Col 16, lines 42-55).

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Ida et al. (US 6537801) in light of Sogawa (US 20010044058).

Regarding Claim 15, Ida et al. ('801) does not explicitly state wherein the optical marking means includes a sequence of engraved areas and non-engraved areas. However he does disclose wherein the optical marks are made via etching (Col 13, lines 27-48 and Col 16, line 58-Col 17, line 24) which is a known form of engraving in the art as taught by Sogawa ('058) in Paragraph 48.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ida et al. (US 6537801) in light of Sogawa (US 20010044058).

Regarding Claim 16, Ida et al. ('801) does not explicitly state wherein the engraved areas and non-engraved areas form a checker board. It would have been an obvious matter of design choice to form an engraving based on a checker board pattern, since applicant has not disclosed that a checker board pattern solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with other distribution patterns.

Regarding Claim 17, Ida et al. ('801) does not explicitly state wherein the areas of the checker board are oblique with respect to the molecular recognition areas. However he does disclose doped regions (of which the examiner deems to be equivalent to an oblique area) that alternate with undoped regions (Col 15 line 27-Col 16 line 36).

Regarding Claim 18, Ida et al. ('801) does not explicitly state wherein the surface area of each recognition area is greater than the surface area of an engraved area or a non-engraved area of the optical format.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate a surface area of each recognition area is greater than the

surface area of an engraved area or a non-engraved area of the optical format, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ida et al. (US 6537801).

Regarding Claims 21-22, Ida et al. ('801) discloses a device for reading a biochip defined in claim 13, comprising: a first optical head configured to project first incident light onto the biochip; first means for scanning the biochip by the first incident light; second means for scanning the biochip by the second incident light; a first optical system associated with an optical head to project first light originating from the biochip and related to the first incident light onto a first optoelectronic sensor, demonstrating presence or absence of target molecules on each molecular recognition area, the first optoelectronic sensor configured to supply signals corresponding to the first light; a second optical system associated with an optical head to project second light originating from the optical format of the biochip and related to the second incident light onto a second optoelectronic sensor, the second optoelectronic sensor configured to supply signals corresponding to the second light; first means for recording at least part of the signals corresponding to the first light; second means for recording at least part of the signals corresponding to the second light; and means for processing said signals to adjust the signals corresponding to the first light and signals corresponding to the second light, on a fictitious biochip as a function of means for determining relative position of the two formats (Col 9, line 7-Col 11, line 67).

Ida et al. ('801) does not explicitly state wherein a second optical head is configured to project second incident light onto the biochip. However he does disclose an optical head capable of projecting light onto the biochip. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a second optical head

in the same direction as the first optical head, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. *Regis Paper Co. v. Bemis Co., 193 USPQ 8.*

Regarding Claim 23, Ida et al. ('801) discloses a mechanical system or an autofocus system to maintain the focus of the reading beam on the surface of the biochip (Col 6, lines 8-16).

Regarding Claim 24, Ida et al. ('801) does not disclose a piezoelectro actuator. However he does disclose an electromagnetic actuator and means for slaving the actuator (Col 9, lines 26-32) of which the examiner deems to be a functional equivalent.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one known element in the art for another with a reasonable expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYDIA EDWARDS whose telephone number is (571)270-3242. The examiner can normally be reached on Mon-Thur 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571.272.1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LYDIA EDWARDS/
Examiner
Art Unit 1797

LE

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797